

ABSTRACT

A method and apparatus for measuring properties of a liquid composition includes a mechanical resonator, such as a cantilever, connected to a measurement circuit. The mechanical resonator can be covered with a coating to impart additional special detection properties to the resonator, and multiple resonators can be attached together as a single sensor to obtain multiple frequency responses. The invention is particularly suitable for combinatorial chemistry applications, which require rapid analysis of chemical properties for screening. In one embodiment, the resonator is operated at a frequency of less than 1 MHz.